Case 2978

Plumularia Lamarck, 1816 (Cnidaria, Hydrozoa): proposed conservation by the designation of *Sertularia setacea* Linnaeus, 1758 as the type species

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Abstract. The purpose of this application is to conserve the current use of the name *Plumularia* Lamarck, 1816 for a familiar, near-cosmopolitan genus of thecate hydroids by setting aside two overlooked type species designations. Recognition of the first of these, due to Busk (1851), would result in the name *Plumularia* becoming a junior subjective synonym of *Aglaophenia* Lamouroux, 1812. The second, due to Apstein (1915), would result in the name *Plumularia* being applied to the genus of hydroids long known as *Kirchenpaueria* Jickeli, 1883. In both cases a new name would become necessary for *Plumularia* as long understood. It is proposed that the designation by Broch (1918) of *Sertularia setacea* Linnaeus, 1758 be formally adopted.

Keywords. Nomenclature; taxonomy; Hydrozoa; hydroids; *Plumularia*; *Plumularia setacea*.

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1. The marine hydroid superfamily PLUMULARIOIDEA Agassiz, 1862 includes several near-cosmopolitan genera. Our application concerns the names of three of them which, at least in temperate latitudes, form conspicuous colonies which can be found intertidally. Their names, *Aglaophenia*, *Plumularia* and *Kirchenpaueria*, are consequently familiar to many non-specialists. Some overlooked type species designations threaten the stability of these names, which our application seeks to protect.

2. Lamouroux (1812, p. 184) included five nominal species in his new genus *Aglaophenia*, one of which was *Sertularia pluma* Linnaeus, 1758 (p. 811), but he did not designate a type species.

3. The genus *Plumularia* Lamarck (1816, p. 123) originally included 17 nominal species, among them *Sertularia pinnata* and *S. setacea*, both of Linnaeus (1758, p. 813), and *Plumularia cristata* Lamarck, 1816 (p. 125). The last name was a new name for *Sertularia pluma* Linnaeus, 1758 and hence its junior objective synonym. The publication date for Lamarck's work was given on the title page as March 1816 and this date was accepted by Sherborn (1922, p. lxxvii).

4. Several of the species assigned to *Plumularia* by Lamarck (1816) were referred to *Aglaophenia* Lamouroux, 1812 by Lamouroux (1816, pp. 164–174). These included *Sertularia pinnata* and *S. setacea*. The publication date of Lamouroux's (1816) work was given by Sherborn (1922, p. lxvii) as October 1816.

5. Busk (1851, p. 118) subsequently designated *Plumularia cristata* Lamarck, 1816 as the type species of *Plumularia*. This designation, although valid, is not in accord with the concept of the genus that has been accepted for most of the present century, and it has been overlooked. Recognition of Busk's type designation would render the name *Plumularia* Lamarck, 1816 a junior subjective synonym of *Aglaophenia* Lamouroux, 1812 (see para. 7 below), to the detriment of the accepted use of both names.

6. Busk (1851, p. 118) stated *Plumularia* to be 'an artificially constructed genus', implying that it merited splitting. He noted (p. 119) that, if the genus were eventually to be divided, 'those species of which *Plumularia setacea* may be taken as the type, would form a second genus'. Busk thus came close to conceiving the modern concepts of the two genera *Aglaophenia* and *Plumularia*, although had his inclinations been followed *setacea* would have been assigned to *Aglaophenia* and *cristata* to *Plumularia*, the reverse of almost all subsequent practice.

7. The name *Plumularia* was for many years generally regarded as synonymous with *Aglaophenia*, albeit by some authors provisionally (see Johnston, 1847 and Busk, 1851; para. 5 above). The distinction hinted at by Busk (1851) was introduced by McCrady (1859, pp. 199–203). It was accepted by Agassiz (1862, p. 358) and has been supported by essentially all authorities. The two genera became the bases of the families PLUMULARIIDAE Agassiz, 1862 and AGLAOPHENIIDAE Marktanner-Turneretscher, 1890 (p. 262), which are still in use today.

8. McCrady (1859, p. 201), in discussing the genus *Aglaophenia*, stated 'I take *Plumularia cristata* as the nucleus of this group'. This statement does not constitute a valid type species designation because *P. cristata* was not among the five nominal species originally included in *Aglaophenia* by Lamouroux (1812) and McCrady did not mention the senior objective synonym *Sertularia pluma* Linnaeus, 1758 (para. 3 above). *S. pluma* was designated the type species of *Aglaophenia* by Apstein (1915, p. 126), and this accords both with McCrady's concept of the genus and with previous, subsequent and current use (see, for example, Svoboda & Cornelius, 1991, p. 10).

9. *Sertularia pinnata* Linnaeus, 1758 was designated in the same paper by Apstein (1915, p. 127) as the type species of *Plumularia*. Apstein's invalid designation has sensibly been disregarded (see Broch, 1918, pp. 52–53; Cornelius, 1995, p. 158). *S. pinnata* was later designated the type species of another genus, *Kirchenpaueria* Jickeli, 1883 (p. 645, pl. 28, figs. 25–28), by Broch (1918, p. 195). The genus *Kirchenpaueria* is commonly recognised and the name widely used, but acceptance of Apstein's (1915) designation would render *Kirchenpaueria* a junior objective synonym of *Plumularia*, upsetting established use. *Kirchenpaueria* is the type genus of KIRCHENPAUERIINAE Stechow, 1921 (p. 259). This name has been employed in major works, in at least one (Bouillon, 1985) at family level but in more (see, for example, Millard, 1975; Cornelius, 1995) for a subfamily of the PLUMULARIIDAE.

10. Broch (1918, p. 195) attempted to resolve the potential nomenclatural problem introduced by Apstein (1915) (para. 9 above) by designating *Plumularia setacea* as the

type species of *Plumularia*, and this accords with common use before and since. This designation was cited in a major work by Millard (1975) but it is invalid because of the earlier designations by Busk (1851) and by Apstein (1915) (paras. 5 and 9 above; Cornelius, 1995, p. 158). Since Broch (1918) the name *Plumularia* has been applied consistently to a genus having *Sertularia setacea* Linnaeus, 1758 as its type species, and *Kirchenpaueria* has been applied to that having *S. pinnata* Linnaeus, 1758 as its type (see, for example, Medel & Vervoort, 1995, p. 56; Cornelius, 1995, pp. 129 and following; and numerous papers cited in these works).

11. To maintain accepted use of the well-known name *Plumularia* Lamarck, 1816 and to prevent its loss in the synonymy of *Aglaophenia* Lamououx, 1812, needlessly upsetting 150 years of stable use of both names, we propose that Busk's (1851) designation of *Plumularia cristata* as the type species of *Plumularia* be set aside. We also propose that Apstein's (1915) designation of *Sertularia pinnata* as the type species be set aside. If adopted, this designation would result in *Plumularia* becoming the valid name for the group of species now known as *Kirchenpaueria* and the latter being lost as a junior objective synonym; a new name would be needed for *Plumularia* as currently understood. The name *Kirchenpaueria* has been intermittently used, always in its original sense, for 113 years and, since Broch (1918), has been almost universally adopted. Stability of hydroid nomenclature would not be served by accepting either of these two designations and we propose that the designation of *Sertularia setacea* by Broch (1918) as the type species of *Plumularia* be accepted.

12. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to set aside all previous designations of type species for the nominal genus *Plumularia* Lamarck, 1816 prior to that by Broch (1918) of *Sertularia setacea* Linnaeus, 1758;

(2) to place on the Official List of Generic Names in Zoology the name *Plumularia* Lamarck, 1816 (gender: feminine), type species by subsequent designation by Broch (1918) *Sertularia setacea* Linnaeus, 1758, as ruled in (1) above;

(3) to place on the Official List of Specific Names in Zoology the name *setacea* Linnaeus, 1758, as published in the binomen *Sertularia setacea* (specific name of the type species of *Plumularia* Lamarck, 1816).

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